

Obesity Treatment and Management of Type 2 Diabetes in Adults

- ❖ In persons with type 2 diabetes, obesity is associated with poor control of blood glucose, blood pressure, and cholesterol, and elevates risks of cardiovascular and microvascular disease.
- ❖ Intentional weight loss is associated with a decrease in mortality in overweight persons with type 2 diabetes.
- ❖ Weight loss is recommended to lower elevated blood glucose levels in overweight and obese persons with type 2 diabetes.
- ❖ Weight loss and weight maintenance therapy should employ the combination of reduced-calorie diets, increased physical activity, and behavior therapy.
- ❖ During the past two decades, the prevalence of obesity in adults has risen sharply. South Dakota statistics parallel those of the nation.
- ❖ *Healthy People 2010* goals for South Dakotans are to reduce overweight and obesity within state residents by promoting physical activity and healthy eating. Currently 62.8 percent of adults are overweight and 25.5 percent are classified as obese.

What is the definition of obesity?

Obesity is defined as a Body Mass Index (BMI) of $> 30 \text{ kg/m}^2$ with overweight being a BMI of 25 to 29.9 kg/m^2 . Elevated BMI is only one factor related to risk in overweight or obese individuals. The National Heart, Lung, and Blood Institute recommends the addition of the following guidelines:

- ❖ The individual's waist circumference (because abdominal fat is a predictor of risk for obesity-related diseases).
- ❖ Other risk factors the individual has for diseases and conditions associated with obesity (e.g. hypertension or physical inactivity).

What is the relationship between obesity and type 2 diabetes?

As many as 90 percent of individuals with type 2 diabetes are overweight or obese. Not only is there a strong association between the presence of obesity and the development of type 2 diabetes, but obesity also complicates its management. The presence of obesity exacerbates the metabolic abnormalities of type 2 diabetes, including hyperglycemia, hyperinsulinemia, and dyslipidemia. Obesity also increases insulin resistance and glucose intolerance and ultimately may contribute to excessive morbidity and mortality, mostly as a result of cardiovascular comorbidities such as hypertension, dyslipidemia, and type 2 diabetes. Additionally, obesity can contribute to musculoskeletal disorders, cancer, psychological and psychosocial disturbances, and quality of life impairments. There is strong evidence that weight loss produced by lifestyle modification can reduce blood glucose and A1C levels in patients with type 2 diabetes.

What are the obesity treatment goals for people with type 2 diabetes?

Weight loss is recommended to lower elevated blood glucose levels in overweight and obese persons with type 2 diabetes. Goals include:

- ❖ Reduce body weight by 10 percent from baseline through lifestyle modification (generally one to two pounds per week for a period of six months).
- ❖ Maintain a lower body weight over the long term.
- ❖ Prevent further weight gain.

What is lifestyle modification?

The components of an effective lifestyle modification program include dietary modification, physical activity, and behavior modification.

Can weight loss be maintained?

After successful weight loss, a program consisting of dietary therapy, physical activity, and behavior therapy, which should be continued indefinitely, enhances the likelihood of weight loss maintenance. A weight maintenance program should be a priority after the initial six months of weight loss therapy. Research suggests that increased contact between a patient and a practitioner is predictive of long-term weight loss maintenance.

Table 6: Weight Loss and Weight Maintenance Therapy

Treatment Component	Strategy
Dietary Therapy	Low-calorie diets are recommended. Reducing dietary fat alone without reducing calories is not sufficient for weight loss. A diet that is individually planned to help create a deficit of 500 to 1000 kcal/day should be an integral part of any program aimed to achieve a weight loss of one to two pounds/week.
Physical Activity	Physical activity should be an integral part of weight loss therapy and weight maintenance. Initially, moderate levels of physical activity for 30 to 45 minutes, 3 to 5 days a week, should be encouraged with a long-term goal to accumulate at least 30 minutes or more of moderate-intensity physical activity on 5 or more days a week.
Behavior Therapy	Practitioners need to assess the patient's motivation to enter weight loss therapy, assess the readiness of the patient to implement the plan, and then take appropriate steps to motivate the patient for treatment. Behavior therapy strategies to promote diet and physical activity should be used routinely as they are helpful in achieving weight loss and weight maintenance.

References:

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